Claim Amendments

Please cancel claims 24 and 50 and change the status identifier of claims 38-48 from "withdrawn" to "canceled" as follows:

1. (previously presented) A method of forming a cured, dielectric composition on a substrate, comprising the steps of:

(a) coating a composition comprising a thermally curable, dielectric precursor onto at least a portion of the substrate;

(b) causing the coated substrate to be positioned in a process chamber;

(c) while the coated substrate is positioned in the process chamber:

(i) thermally curing the dielectric precursor to form the cured dielectric composition, wherein at least a portion of the thermal curing occurs under anaerobic conditions; and

(ii) causing a gas to coolingly contact the cured dielectric composition; and

(d) after said gas coolingly contacts the cured dielectric composition, removing the coated substrate from the process chamber.

2. (previously presented) The method of claim 1, wherein the dielectric precursor comprises an organic prepolymer component.

3. (previously presented) The method of claim 1, wherein the dielectric precursor comprises an organic prepolymer component, and wherein at least a portion of said gas cooling occurs under anaerobic conditions.

4. (original) The method of claim 3, wherein at least substantially all of the thermal curing and cooling gas contact occur under anaerobic conditions.

5. (previously presented) The method of claim 2, wherein the anaerobic conditions comprise thermally processing the coated substrate in an anaerobic environment comprising no more than about 200 ppm oxygen.

6. (previously presented) The method of claim 4, wherein the anaerobic environment comprises no more than about 200 ppm oxygen.

7. (previously presented) The method of claim 1, wherein the dielectric precursor comprises an inorganic prepolymer component, and wherein at least a portion of said gas cooling occur under anaerobic conditions.

8. (original) The method of claim 1, wherein a side door operationally engages a portal through which a substrate to be processed is transferred to and from the process chamber.

9. (original) The method of claim 1, wherein the coating step comprises spin coating the composition comprising the curable dielectric precursor onto the substrate.

10. (original) The method of claim 1, wherein said dielectric precursor has a cure temperature, the coated composition comprises a solvent, and thermal curing occurs at a temperature at or above the cure temperature, and wherein the method further comprises the step of, after coating but prior to curing, causing the coated composition to be pre-baked at a temperature below the cure temperature in order to remove at least a portion of the solvent.

11. (original) The method of claim 10, wherein said pre-baking occurs under conditions such that the coated composition comprises an amount of residual solvent.

12. (original) The method of claim 11, wherein said amount of residual solvent comprises from about 0.5 to about 5 weight percent of solvent of the total solvent included in the composition at the time of coating.

13. (original) The method of claim 1, wherein at least a portion of the thermal curing step occurs under vaccuum.

14. (original) A method of forming dielectric compositions on a plurality of substrates, comprising the steps of:

(a) coating a composition comprising a curable dielectric precursor onto a first substrate;

(b) causing the coated substrate to be prebaked, said prebaking being initiated after a first time interval from the end of the coating step;

(c) causing the coated substrate to be thermally cured, said thermal curing being initiated after a second time interval from the end of the pre-baking step;

(d) causing the thermally cured substrate to be cooled, said cooling being initiated after a third time interval from the end of the thermal curing step; and

(e) repeating steps (a) through (d) for at least one additional substrate, wherein the respective second time intervals for each of the first coated substrate and the at least one additional coated substrate are substantially the same.

15. (original) The method of claim 14, wherein the respective first time intervals for each of the first coated substrate and the at least one additional coated substrate are substantially the same.

16. (original) The method of claim 14, wherein the respective third time intervals for each of the first coated substrate and the at least one additional coated substrate are substantially the same.

17. (original) The method of claim 16, wherein the respective first time intervals for each of the first coated substrate and the at least one additional coated substrate are substantially the same.

18. (original) The method of claim 14 wherein at least a portion of the cooling occurs by causing a gas to coolingly contact the thermally cured substrate, and wherein the thermal curing and said cooling gas contact occur in the same process chamber.

19. (original) The method of claim 14, wherein the dielectric precursor comprises an organic prepolymer component, and wherein at least a portion of said thermal curing occurs under anaerobic conditions.

20. (original) The method of claim 15, wherein the dielectric precursor comprises an organic prepolymer component and wherein at least a portion of said thermal curing and said cooling gas contact occur under anaerobic conditions.

21. (original) The method of claim 18, wherein at least substantially all of the thermal curing and cooling gas contact occur under anaerobic conditions.

22. (original) The method of claim 14, wherein at least a portion of the thermal curing step occurs under vaccuum.

23. (original) A method of forming a cured, dielectric composition on a substrate, comprising the steps of:

(a) coating a composition comprising a thermally curable, dielectric precursor and an amount of solvent such that the composition has a coatable viscosity onto at least a portion of the substrate;

(b) pre-baking the coated substrate at a first, relatively low temperature profile under conditions such that at least a portion of the coated dielectric precursor is uncured and the coated composition comprises a residual amount of solvent;

(c) thermally curing the dielectric precursor at a second, relatively high temperature profile under conditions such that at least substantially all of the dielectric precursor is cured to form the dielectric composition; and

(d) cooling the cured dielectric composition.

24. (canceled)

25. (previously presented) A method of forming respective dielectric compositions on a plurality of substrates, comprising the steps of:

(a) causing a first composition comprising a first dielectric precursor to be coated onto a first substrate;

(b) causing the coated, first substrate to be positioned in a processing chamber;

(c) while the first substrate is positioned in the processing chamber:

(i) causing the first substrate to be in thermal contact with a heat source under conditions effective to thermally cure the first, coated substrate, wherein at least a portion of the thermal curing occurs under anaerobic conditions; and

(ii) causing a gas to coolingly contact the thermally cured, first substrate; and

(d) repeating steps (a) through (c) for a second substrate.

26. (original) The method of claim 25, wherein at least a portion of at least one of the repeated steps (a) through (c) occurs while at least a portion of at least one of said steps (a) through (c) is carried out with respect to the first substrate.

27. (original) The method of claim 25, wherein said coating, positioning, thermal curing, and cooling steps are carried out in a cluster tool comprising at least one input/output module, at least one coating module, and at least one combination cure/cool module.

28. (original) The method of claim 27, wherein the tool comprises at least two cure/cool modules and at least a portion of the curing step for the first substrate occurs while at least a portion of the curing step for the second substrate is occurring.

29. (original) The method of claim 27, wherein the tool comprises at least two cure/cool modules and at least a portion of the gas cooling step for the first substrate occurs while at least a portion of the gas cooling step for the second substrate is occurring.

30. (original) The method of claim 27, wherein the tool comprises at least two cure/cool modules and at least a portion of the gas cooling step for the first substrate occurs while at least a portion of the gas cooling step for the second substrate is occurring.

31. (original) The method of claim 25, wherein each of the first and second substrates are processed in parallel according to first and second process recipes, respectively, said first and second process recipes being different.

32. (original) The method of claim 29, wherein each of the first and second substrates are processed in parallel according to first and second process recipes, respectively, said first and second process recipes being substantially identical.

33. (original) The method of claim 25, further comprising subjecting each of the first and second coated substrates to respective pre-bake treatments, said pre-bake treatments occurring prior to thermal curing.

34. (original) The method of claim 33, wherein thermal curing of the first coated substrate is initiated after a first time interval from the end of the corresponding pre-bake treatment and thermal curing of the second coated substrate is initiated after a second time interval from the corresponding pre-bake treatment, said first and second time intervals being substantially identical.

35. (original) The method of claim 34, wherein each of the first and second substrates are processed sequentially according to first and second recipes, respectively, said first and second recipes being substantially identical.

36. (original) The method of claim 34, wherein each of the first and second substrates are processed sequentially according to first and second recipes, respectively, said first and second recipes being different from each other.

37. (previously presented) A method of forming respective dielectric compositions on a plurality of substrates, comprising the steps of:

(a) providing first and second groups of substrates, each of said groups comprising at least one substrate to be processed;

(b) in accordance with a first process recipe:

(i) causing a first composition comprising a first dielectric precursor to be coated onto each substrate in the first substrate group;

(ii) causing each of the coated, substrates of the first group to be positioned in a processing chamber;

(iii) while each of the substrates of the first group is positioned in the processing chamber: causing each such coated substrate of the first group to be in thermal contact with a heat source under conditions effective to thermally cure such coated substrate, wherein at least a portion of the thermal curing occurs under anaerobic conditions; and causing a gas to coolingly contact each of the thermally cured, first substrates; and

(c) in accordance with a second process recipe different than the first process recipe, repeating step (b) for each of the substrates in the second group.

38-48. (canceled)

49. (previously presented) The method of claim 1, wherein the anaerobic conditions comprise less than 20 ppm oxygen.

50. (canceled)

51. (previously presented) The method of claim 25, wherein the anaerobic conditions comprise less than 20 ppm oxygen.

52. (previously presented) The method of claim 37, wherein the anaerobic conditions comprise less than 20 ppm oxygen.